Commonwealth of Kentucky
Division for Air Quality

PERMIT APPLICATION SUMMARY FORM

Completed by: Carolina Alonso

GENERAL INFORMATION:

Name:	Lafarge North America
Address:	5145 Mary Ingles Hwy, Silver Grove, KY
Date application received:	04/25/2006
SIC/Source description:	3275, Gypsum products
Source ID #:	21-037-00090
Source A.I. #:	591
Activity #:	APE20050002
Permit number:	V-04-042 (Revision 2)

APPLICATION TYPE/PERMIT ACTIVITY:

[ ] Initial issuance	[ ] General permit
[X] Permit modification	[ ]Conditional major
__Administrative	[X] Title V
X Minor	[X] Synthetic minor
__Significant	[X] Operating
[ ] Permit renewal	[ ] Construction/operating

COMPLIANCE SUMMARY:

[ ] Source is out of compliance [ ] Compliance schedule included

[ ] Compliance certification signed

APPLICABLE REQUIREMENTS LIST:

[ ] NSR	[X] NSPS	[X] SIP
[ ] PSD	[ ] NESHAPS	[ ] Other
[ ] Netted out of PSD/NSR	[ ] Not major modification per 401 KAR 51:001, 1(116)(b)	

MISCELLANEOUS:

[ ] Acid rain source
[ ] Source subject to 112(r)
[ ] Source applied for federally enforceable emissions cap
[ ] Source provided terms for alternative operating scenarios
[ ] Source subject to a MACT standard
[ ] Source requested case-by-case 112(g) or (j) determination
[ ] Application proposes new control technology
[ ] Certified by responsible official
[ ] Diagrams or drawings included
[ ] Confidential business information (CBI) submitted in application
[ ] Pollution Prevention Measures
[X] Area is non-attainment (list pollutants): PM2.5, Ozone

EMISSIONS SUMMARY:

Pollutant	Actual (tpy)	**Title V Potential (tpy)
PM/PM_{10}	98.3	239.54
$PM_{2.5}$	34.4	121.23
SO_2	0.44	2.72
NOx	32.5	184.65
CO	78.5	456.33
VOC	4.0	73.16
Source wide HAPs > 10 tpy	None	None

** Title V potential emissions based on last permit revision (permit V-04-042 Revision 1)

SOURCE DESCRIPTION:

Lafarge operates a synthetic gypsum wallboard forming facility in Silver Grove, Kentucky. The facility, which commenced operation on June 25, 2000, produces wallboard from synthetic gypsum (calcium sulfate dihydrate [$CaSO_4 \cdot 2H_2O$]). Synthetic gypsum is a beneficial by-product of the flue-gas desulfurization systems of power plants.

In the process, gypsum is first dried in a dryer and then sent to a calciner. The resulting stucco is then mixed with various additives and foaming agents to form a slurry, which is fed between paper layers on a forming line to make a continuous board. The wallboard attains firmness as the gypsum begins to recrystallize on the forming line. The board is then passed through a dryer to remove excess water. The boards are then trimmed, marked and stacked.

The Silver Grove facility generates airborne pollutants, primarily from combustion of natural gas and from the handling and processing of gypsum, stucco, and other materials. Low-NO_X burners are employed in all of the combustion units, which are exclusively fired on natural gas. Material processing and conveying systems are equipped with integrated baghouse systems to capture products and minimize emissions. The potential for fugitive PM emissions from gypsum storage and vehicle movements on roads is minimized through established work practices that are executed in accordance with written procedures stipulated in the permit.

Lafarge proposes the use of Hydraulic Mulch (a comprised of cellulose fibers, typically derived from paper) as a substitute for outdoor gypsum storage piles. The Hydraulic Mulch pile covering is expected to be as effective as tarps at preventing the wind erosion of particulate matter.